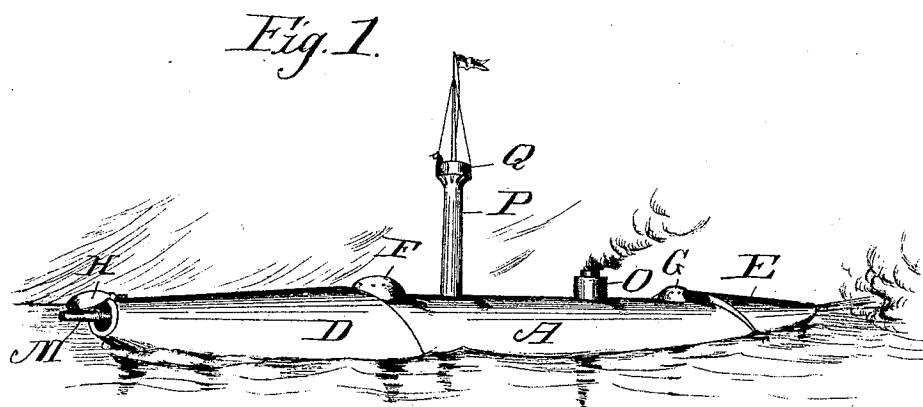
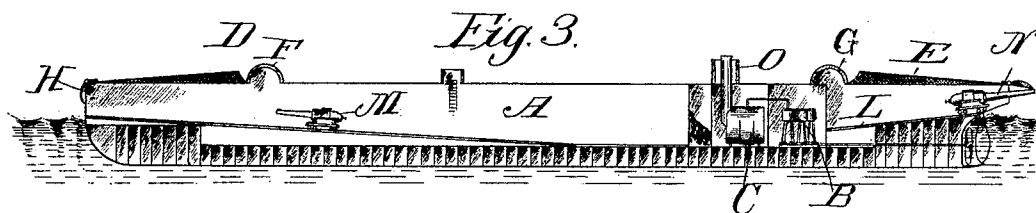
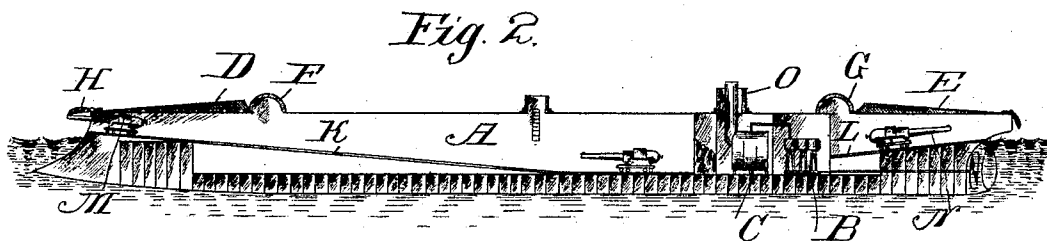


(No Model.)

A. McDOUGALL.
WAR BOAT.

No. 498,679.

Patented May 30, 1893.



Witnesses
J. Stack
Arthur D. Bennett

Inventor
Alexander Mc Dougall
By his Attorneys
Samuel L. Ayer

UNITED STATES PATENT OFFICE.

ALEXANDER MCDougALL, OF DULUTH, MINNESOTA.

WAR-BOAT.

SPECIFICATION forming part of Letters Patent No. 498,679, dated May 30, 1893.

Application filed July 29, 1892. Serial No. 441,613. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER MCDougALL, a citizen of the United States, residing at Duluth, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in War-Boats; and I do hereby declare the following to be a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My present invention relates to various new and useful improvements in war vessels, which are especially adapted and designed for use in the defense of harbors and coasts. The present boat possesses certain advantages of operation.

For a better comprehension of my invention attention is directed to the accompanying drawings forming a part of this specification and in which—

Figure 1, is a perspective view of my improved war vessel; Figs. 2 and 3 longitudinal sectional views of modified forms.

In the above views corresponding parts are designated by the same letters of reference.

A, is the hull of one of my improved steamboats. Such a steamboat is fully described in Letters Patent of the United States, dated June 3, 1890, numbered 429,468, granted to myself. The hull of this steamboat consists of metallic plates secured to transverse ribs, so as to form a hollow shell. The bow of the boat, as described in said Letters Patent is spoon-shaped, and the stern is similarly constructed, except that it is provided with a skeg, which facilitates steering. The hull is without sheer, which cheapens its construction, and the deck is curved. The particular curve of the deck which I have referred to in said patent, is that of an ellipsoid, but I do not wish of course to be limited to this particular shape, although it possesses many advantages which have been before pointed out. The bottom of the boat is rounded, although I have mentioned in said patent that it may be flat or peaked. The sides of the boat are parallel, both longitudinally and vertically, which also serves to cheapen the construction of the hull. Within the bow and stern are preferably water-tanks, and the bottom part

of the boat is formed into compartments. These tanks and compartments may be filled wholly or partially with water, by which the boat may be submerged to its proper load water-line or trimmed. By pumping this water out of these compartments and tanks, the draft of the boat may be made very light so that it may enter shallow water-ways and pass over bars. This facility is particularly advantageous to a war vessel as it prevents the pursuit of men-of-war of deep draft, and it will allow one of my improved war vessels to approach cities, having poor harbors which may be thought secure from the attacks of such men-of-war.

B— is an engine which is placed within the boat preferably near the central part thereof. This engine is to be of any appropriate construction, and for protection may be surrounded by coal bunkers in the usual way. This engine operates the propeller which is placed at the stern either in the rear of the skeg or within the skeg. Two propellers may be used one on each side of the skeg, or if it is desired to secure great speed, three propellers may be used.

C— is a boiler or boilers placed within the hull either in the front or the rear of the engine B.

D— is an auxiliary armor placed over the bow portion of the boat and E— is an auxiliary armor placed over the stern portion of the boat. Both of these armors are similar in construction. Each consists of a heavy wooden or elastic backing covered with metallic plates or a steel casting either in whole or in section may be used. Each armor extends some distance below the load water-line. The auxiliary armor at the bow is preferably thicker at its upper after end and the auxiliary armor at its stern is thicker at its forward end.

F— is a conning-tower extending up from the deck directly in the rear of the forward auxiliary armor, and G— is a conning-tower extending up from the deck directly in advance of the rear auxiliary armor. By making the auxiliary armor at the bow thicker at its after part, or, in other words, by making it inclined as I have shown the forward con-

ning-tower will be effectively protected from the action of shot and shell as will be understood. The aft conning-tower G will also be protected in the same way by the auxiliary armor at the stern. By making the auxiliary armor at the bow inclined as I have shown a very convenient bulwark is offered to enable the officers and crew to walk about the decks in safety. The extreme nose of the boat consists of a heavy hinged plate H, adapted to be swung outwardly, and the stern consists of a similar hinged plate arranged the same way.

Extending down from the bow and the stern on the inside of the boat are inclined tracks K. and L., which pass into the hold. Suitable guns M. and N. are mounted on these tracks. These guns are loaded in the interior of the boat and are then moved up the inclined track K. and L. so as to point out through the bow or stern, after which they are fired. The guns are now returned to the hold of the boat and are re-loaded.

If it is desired, two tracks may be used at the bow, and two tracks at the stern, so that two guns may be used at each end. These guns are loaded and fired alternately. The proper aim of the forward guns is effected by the officer in the forward conning-tower. This officer steers the boat so that it will point directly at the object which is to be fired upon. The only duty of the gunner in the interior of the hull is to effect the proper elevation, which he can do by ordinary rules of gunnery on learning the distance which intervenes between the guns and the object which is to be hit. The aiming of the rear gun is effected by the officer in the rear conning-tower. There may be provided an auxiliary steering apparatus in this rear conning-tower by which the officer therein may control the movements of the vessel, or he may give his instructions to the officer in the fore conning-tower by means of a speaking tube or otherwise. The smokestack from the engines passes up through the deck, and is protected by a heavy metallic turret O.

P.—is a metal mast extending up from the deck to a proper height and carrying a crow's-nest Q. at its upper end. This crow's-nest can be reached from the interior of the boat by means of a metallic ladder passing up through the hollow mast P. Machine guns of any appropriate construction are mounted in this crow's-nest Q. and are to be operated by a portion of the crew. This crow's-nest offers a convenient point for a look-out, and men-of-war can thereby be sighted long before the hull of my improved war vessel could be seen, by reason of the fact that there is such a small portion of the hull out of water. The machine guns in this crow's-nest offer an effective means for preventing boarding and these guns may also be put into use in assailing torpedo boats and for fighting in close quarters.

In Fig. 2 I have illustrated a war vessel, provided with a ram bow, which further increases its functions in a very important regard. Such a ram bow, owing to the great strength and rigidity which is required of it, should preferably be formed in the construction of the vessel; that is to say, the original frames of the boat should be so formed so as to constitute the proper shape of the bow. In this case the war vessel would be capable of effective use only as a weapon of defense, but it is to be understood that the said ram may be a distinct and separate element, which can be attached in any suitable way to the bow portion of the boat. When used as a freight carrier, and for similar purposes, the said ram is to be removed, and the original functions and advantages of the vessel are regained.

The vessel shown in Fig. 3. is similar in most respects to the war boats before referred to, differing therefrom only in the particular shape of the bow. In this boat, I make use of an ordinary wedge-shape or cut-away bow, instead of the spoon-shape bow of Fig. 1., or the ram bow of Fig. 2.

Having now described my invention, what I claim as new therein, and desire to secure by Letters Patent, is as follows:

1. An improved war vessel, consisting of a hull, substantially as described, an auxiliary armor D around the bow of the vessel and gradually increasing in thickness near the rear end, an auxiliary armor E around the stern of the vessel and gradually increasing in thickness near its front end; a conning tower F mounted on the deck of the vessel in rear of the forward auxiliary armor and protected by the same, and another conning tower G in advance of the rear auxiliary armor and protected by the same, substantially as described.

2. An improved war vessel, consisting of a hull, substantially as described; an auxiliary armor D around the bow of the vessel and gradually increasing in thickness toward its rear end, an auxiliary armor E around the stern of the vessel and gradually increasing in thickness near its front end; the conning tower F mounted on the deck of the vessel in the rear of the forward auxiliary armor and protected by the same; another conning tower G in advance of the rear auxiliary armor and protected by the same, and a hollow mast P midway between said conning towers F and G, extending up from the deck and carrying a crow's nest Q, substantially as described.

3. An improved war vessel, consisting of a hull, substantially as described, an auxiliary armor D around the bow of the vessel and gradually increasing in thickness near its rear end; an auxiliary armor E around the stern of the vessel and gradually increasing in thickness near its front end, a conning tower F mounted on the deck of the vessel

in the rear of the forward auxiliary armor
and protected by the same, another conning
tower G in advance of the rear auxiliary ar-
mor and protected by the same, a gun M
5 mounted within the vessel on the track K
and adapted to be fired out of the bow, and a
gun N mounted within the vessel on the track

K and adapted to be fired out of the stern,
substantially as described.

ALEXANDER McDOUGALL.

In presence of—

ARTHUR D. BENNETT,
JOSEPH C. STACK.